

PVMS OF MEDICAL EQUIPMENT

Clinical Specialty	Radiological Equipment
Generic Name	Digital Color Doppler (LOW END).
Clinical Purpose	It is immediately available imaging modality with its main use in obstetrical and antenatal care likewise in conditions when ionizing radiations are contra indicated.

TECHNICAL SPECIFICATIONS

Color Doppler with Fully Digital Beam former having 2D I M-Mode and Doppler Facilities, (PW, HPRF, & Color Flow Imaging) with High Resolution Imaging Doppler Signal Quality; having DICOM Compatibility.

1) **B-MODE Specification:**

- a) Viewing Depth: 30 cm Minimum (Both in B & W and Color).
- b) Frame Rate: 500 flsec or more.
- c) Built-in cine loop with ability to vary reverse and slow motion of display; Internal Memory 2000 I 200MB or more Color Images.
- d) Real time and Freeze Image Magnification at least 10X or more with panning for Real, Freeze and Memorized Images.

2) **M-MODE SPECIFICATION:**

- a) Magnification: X2 or more.
- b) Sweep Speed: Slow, Medium and Fast.
- c) Color Display of M-Mode.

3) **D-MODE SPECIFICATION:**

- a) Pulse-Wave Doppler Measureable Velocity Range.
- b) HPRF Doppler.

3) **CONTINUOUS-WAVE DOPPLER:**

- a) Measurable Velocity Range: Steerable.
- b) Must have Doppler Beam Steering and Bi-Directional Stereo-Audio.
- c) Colorized Spectrum Display.
- d) Automatic Baseline and Velocity Range

Control.

- e) Live Measurements for Doppler Spectrum

4) **COLOR DOPPLER MODE SPECIFICATIONS:**

- Both CW and PW Doppler must be Continuous Steerable in the Color Blood Flow Image Mode in Real Time.
- 2D Image with Color, CW and PW Doppler.
- Windows based System for easy usage with Programmable Control Panel Keys.
- Tissue Harmonic Imaging with 4THI or more Frequency.

- Power Doppler.
- Triplex Mode for Simultaneous Display of Color BIM and D-Mode Displays.
- 200 db system dynamic range or more.

5) **MEASUREMENT PACKAGE:**

To provide Comprehensive Software Package for Measurement of Distance, Circumference, Area, Time Depth, ANGLE, Velocity, Frequency, Heart Rate, Volumes, Nuchal Thickness Measurement Software to be Provided as a Standard.

6) **SYSTEM COMPLETE WITH FOLLOWING FACILITIES AND ACCESSORIES:**

- Minimum 19-Inches LCD I LED Color Monitor, with Resolution 1280 x 1024 I WXGA++ Pixels minimum.
- Foot-Switch.
- 3 Active Transducer Connector for Tran thoracic Probes DVD I CD Drive for Image Storage to be Built-in to the System.
- 500 GB or more Hard Disk Drive to be Built-in to the System.
- Built-in DICOM Compatibility. (3.0 with all components)
- Touch Command Screen Control at least 8-inches LCD I TFT.
- Full DICOM (Upgradable)

7) **UPGRADEABILITY :**

- System Software must be Upgradable.

8) **STANDARD PROBES :**

- 2 - 6 MHz Multi-Frequency Convex Probe for BIM I CDI I PW.
- 5-9 MHz Multi-Frequency Linear Probe for vascular studies.
- TVSIENDOCAVITORY Color PROBE

NOTE:

All Probes must be supplied by same Manufacturer.

+ 1Mhz deviation from the quoted frequencies of probes would be considered as minor deviation.

9) **STANDARD RECORDING DEVICES:**

- Thermal Paper Printer with fifty Rolls of Paper (Black & White). WITH HD
- CINEWAVE UPS Online with 30 minutes back up time for the System.(IMPORTED (EUROPE I USA I JAPAN))

10) Tissue Harmonic imaging without contrast with 4 harmonic frequencies.

11) Pure Wave I Pulse Inversion I Differential Tissue Harmonic Imaging I CPIIHD-THI or similar.

12) Auto Image Optimization I Quick Scan Imaging for Automatic STC I GAIN and Doppler Spectrum Adjustment with Optimal Image Quality by using One Touch Operation.

13) B-Flow I Dynamic Flow Imaging I E-Flow I Micro-V clarify for low flow vessels imaging.

14) Trapezoid Imaging I Virtual Convex Imaging with Linear Probe.

- 15) Compound I AplipureIX-View Plus Imaging for THIIboth Frequency Compounding and Spatial Compounding in BIW and Color Mode.
- 16) Panoramic I SIESCAPE I Logic view Imaging with Measurements.
- 17) Voltage : 220V - 240V, 50 - 60 HZ

Accessories:

1. Thermal Printer 256-Gray scale (Sony, Mitsubishi or equivalent)
2. UPS: on line with sine waves 2 KVA with thirty minutes back up time battery for the system. (IMPORTED)
3. 50 High Density High Glossy thermal paper rolls.
4. Gel: 20 liters

Optional:

7-14 MHz Multi-Frequency Linear Probe for BIMICDIIPW for musculoskeletal studies. Complete with Hardware I needle navigation with tracking system & Software Upgradable. Strain & Shear wave Elastography.

WARRANTY

05- Years Manufacturer's comprehensive warranty of the unit along with other third party items will be provided including service and spare parts for components of the system.

Note: Firms are bound to supply 01 X POC Ultrasound of following specs on FOC basis.

POC ULTRASOUND

Having 2D, M-Mode, Color Doppler, Spectral Doppler & Needle Visualization/Enhancement software, Dicom (3.0) Compatibility. POC Ultrasound will support primary applications in emergency medicine, vascular and pediatrics, small parts, musculoskeletal, intra cardiac. Secondary applications will be supported for Vascular Access and other interventional procedures, Emergency Medicine, Critical Care, Anesthesiology, Vascular Surgery, Musculoskeletal where hand carried ultrasound is required.

- Viewing Depth: - 30 cm or more.
- Frame Rate: - 1100 fps or more.
- Minimum 15 inches' touch LCD.
- One active probe.
- 180 GB of Hard drive/SSD, with capacity to store 30, 000 B/W & Color Images.
- Dicom (3.0) Connectivity.
- Built-In battery for 1 hour operating time.

Standard Probes: -

- 1-5 MHz Convex Transducer Abdominal, Obstetrics, Gynecology, Pelvis, Renal, Emergency Medicine, Vascular and Pediatrics
- 5.0-15.0 MHZ linear transducer for Breast, Cerebrovascular, Emergency Medicine, MSK, Sup MSK, Peripheral Arterial and Vein, Pediatrics.
- 1-4 MHZ Phased array transducer for Abdominal, Obstetrics, Emergency Medicine, Cardiac 2.7-8.0 MHZ Phased array transducer Neonatal Head, Pediatric Abdomen, Pediatric Echo